

**WHAT IS CLAIMED IS:**

1. A method of transplanting an osteochondral allograft comprising the steps of:

- (a) placing an osteochondral allograft in substantially the same orientation as a patient condyle;
- (b) removing a transplantable plug from the allograft and forming a corresponding cavity site at a condylar defect in the patient condyle while maintaining said substantially same orientation therebetween; and thereafter
- (c) inserting the transplantable allograft plug into the cavity site in the patient condyle.

2. The method of claim 1, wherein step (a) includes:

- (a1) inserting a first elongate pin into the patient condyle at a condylar defect site;
- (a2) inserting a second elongate pin into the allograft; and
- (a3) positionally fixing the allograft such that said first and second pins are in substantial parallel alignment with one another.

3. The method of claim 2, wherein step (a3) includes positionally fixing the allograft in sterile clamp.

4. The method of claim 2 or 3, wherein step (a2) includes positioning an annular guide collar on a surface of the allograft, and thereafter positionally fixing said annular guide collar to said allograft surface by inserting at least one second elongate pin.

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5. The method of claim 4, wherein step (b) includes:

(b1) coring a section of the allograft to a predetermined depth by positioning a drill bit within a central aperture of said annular guide collar.

6. The method of claim 5, wherein step (b) includes:

(b2) transecting the allograft substantially perpendicularly to the cored section to thereby release the cored section from the allograft and obtain said transplantable plug.

7. The method of claim 1, wherein step (b) includes:

(b1) coring a section of the allograft to a predetermined depth.

8. The method of claim 7, wherein step (b) includes:

(b2) transecting the allograft substantially perpendicularly to the cored section to thereby release the cored section from the allograft and obtain said transplantable plug.

9. The method of claim 2, which includes prior to step (b) the step of marking the condylar defect site and a region of the allograft from which the plug is to be removed with respective orientation marks.

10. The method of claim 2, which includes severing a section of the transplantable plug to conform to the predetermined depth of said cavity site.

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11. The method of claim 10, which includes chamfering a bottom circumferential edge of the plug section.

12. The method of claim 11, wherein step (c) includes matching the orientation marks of the transplantable plug with the orientation marks of the cavity site, and then seating the plug within the cavity site in a press-fit relationship.

13. A kit for transplanting an osteochondral allograft comprising:  
at least one first elongate pin for insertion into an osteochondral allograft;  
at least one second elongate pin for insertion into a patient condyle at a condylar defect site; and  
a clamp for positionally fixing the osteochondral allograft such that said first pin is oriented in substantial parallel alignment with said second pin.

14. The kit of claim 13, further comprising a coring reamer which receives the first pin to remove a portion of the condylar defect to a predetermined depth and form a cavity site in the patient condyle.

15. The kit of claim 14, further comprising a coring bit which is sized to match receives the second pin and which cores the allograft to form a transplantable allograft plug.

16. The kit of claim 13, further comprising a coring bit, and an annular guide collar having a central recess sized and configured in close conformance to said coring bit so that said guide collar may be sleeved over said coring bit.

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17. The kit of claim 16, further comprising a plurality of said second elongate pins, and wherein said guide collar includes a plurality of guide apertures, each for receiving a respective one of said second elongate pins.

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